

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A frequency dividing circuit comprising:

a first frequency divider for dividing output of a local oscillator and outputting a first in-phase local oscillation signal and a first quadrature local oscillation signal;

a second frequency divider being connected to the first in-phase local oscillation signal output for dividing the first in-phase local oscillation signal and outputting a second in-phase local oscillation signal and a second quadrature local oscillation signal; and

a phase correction means for keeping unit which keeps the phase difference between the first in-phase local oscillation signal and the first quadrature local oscillation signal at 90 degrees.

Claim 2 (canceled)

Claim 3 (currently amended): The frequency dividing circuit according to claim 1, wherein the phase correction ~~means~~ unit includes a dummy circuit being connected to the first quadrature local oscillation signal output and having

input impedance equal to that of the second frequency divider.

Claim 4 (canceled)

Claim 5 (currently amended): The frequency dividing circuit according to claim 3~~or 4~~, wherein the dummy circuit is a circuit including a resistor and a capacitor.

Claim 6 (currently amended): The frequency dividing circuit according to claim 3~~or 4~~, wherein the dummy circuit is the same amplifier as an input amplifier of the second frequency divider.

Claim 7 (currently amended): The frequency dividing circuit according to claim 3~~or 4~~, wherein the dummy circuit is the same circuit as a part of an input amplifier of the second frequency divider.

Claim 8 (original): The frequency dividing circuit according to claim 6, further comprising a control section for controlling the current of the input amplifier and the dummy circuit.

Claim 9 (currently amended): The frequency dividing circuit according to claim 1~~or 2~~, wherein the phase

correction~~means~~ unit includes a control section for controlling the current of an in-phase output amplifier of the first frequency divider and a quadrature output amplifier of the first frequency divider.

Claim 10 (currently amended): The frequency dividing circuit according to claim 1, wherein the phase correction ~~means~~ unit includes a control section for controlling the current of a dummy circuit connected to the first quadrature local oscillation signal output, an in-phase output amplifier of the first frequency divider, and a quadrature output amplifier of the first frequency divider.

Claim 11 (canceled)

Claim 12 (currently amended): The frequency dividing circuit according to claim 10 ~~or 11~~, wherein the dummy circuit is a circuit including a resistor and a capacitor.

Claim 13 (currently amended): The frequency dividing circuit according to claim 10 ~~or 11~~, wherein the dummy circuit has the same circuit configuration as an input amplifier of the second frequency divider.

Claim 14 (currently amended): The frequency dividing circuit according to claim 10 ~~or 11~~, wherein the dummy

circuit has the same circuit configuration as a part of an input amplifier of the second frequency divider.

Claim 15 (original): The frequency dividing circuit according to claim 13, further comprising a control section for controlling the current of the input amplifier and the dummy circuit.

Claim 16 (currently amended): A multimode radio comprising a frequency dividing circuit according to ~~any of claims 1 to 15~~ claim 1.

Claim 17 (original): The multimode radio according to claim 16, further comprising:

a local oscillator for outputting a local oscillation signal to the first frequency divider;

a first quadrature modulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature modulator for performing quadrature modulation of an in-phase baseband transmission signal and a quadrature baseband transmission signal and outputting a first transmission signal having a first frequency; and

a second quadrature modulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature

modulator for performing quadrature modulation of the in-phase baseband transmission signal and the quadrature baseband transmission signal and outputting a second transmission signal having a second frequency.

Claim 18 (original): The multimode radio according to claim 17, further comprising a control section being connected to the second frequency divider, the first quadrature modulator, and the second quadrature modulator for switching a mode between a mode of transmitting the first transmission signal and a mode of transmitting the second transmission signal.

Claim 19 (original): The multimode radio according to claim 16, further comprising:

a local oscillator for outputting a local oscillation signal to the first frequency divider;

a first quadrature demodulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature demodulator for performing quadrature demodulation of a first reception signal having a first frequency and outputting an in-phase baseband reception signal and a quadrature baseband reception signal; and

a second quadrature demodulator to which the second in-phase local oscillation signal and the second quadrature

local oscillation signal are input, the second quadrature demodulator for performing quadrature demodulation of a second reception signal having a second frequency and outputting the in-phase baseband reception signal and the quadrature baseband reception signal.

Claim 20 (original): The multimode radio according to claim 19, further comprising a control section being connected to the second frequency divider, the first quadrature demodulator, and the second quadrature demodulator for switching a mode between a mode of receiving the first reception signal and a mode of receiving the second reception signal.

Claim 21 (original): The multimode radio according to claim 16, further comprising:

a local oscillator for outputting a local oscillation signal to the first frequency divider;

a first quadrature modulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature modulator for performing quadrature modulation of an in-phase baseband transmission signal and a quadrature baseband transmission signal and outputting a first transmission signal having a first frequency;

a second quadrature modulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature modulator for performing quadrature modulation of the in-phase baseband transmission signal and the quadrature baseband transmission signal and outputting a second transmission signal having a second frequency;

a first quadrature demodulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature demodulator for performing quadrature demodulation of a first reception signal having the first frequency and outputting an in-phase baseband reception signal and a quadrature baseband reception signal; and

a second quadrature demodulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature demodulator for performing quadrature demodulation of a second reception signal having the second frequency and outputting the in-phase baseband reception signal and the quadrature baseband reception signal.

Claim 22 (original): The multimode radio according to claim 21, further comprising a control section being connected to the second frequency divider, the first quadrature modulator, the second quadrature modulator, the

first quadrature demodulator, and the second quadrature demodulator for switching a mode between a mode of transmitting the first transmission signal and receiving the first reception signal and a mode of transmitting the second transmission signal and receiving the second reception signal.

Claim 23 (new): A frequency dividing circuit comprising:

a first frequency divider for dividing output of a local oscillator and outputting a first in-phase local oscillation signal and a first quadrature local oscillation signal;

a second frequency divider being connected to the first quadrature local oscillation signal output for dividing the first quadrature local oscillation signal and outputting a second in-phase local oscillation signal and a second quadrature local oscillation signal; and

a phase correction unit which keeps the phase difference between the first in-phase local oscillation signal and the first quadrature local oscillation signal at 90 degrees.

Claim 24 (new): The frequency dividing circuit according to claim 23, wherein the phase correction unit includes a dummy circuit being connected to the first

in-phase local oscillation signal output and having input impedance equal to that of the second frequency divider.

Claim 25 (new): The frequency dividing circuit according to claim 24, wherein the dummy circuit is a circuit including a resistor and a capacitor.

Claim 26 (new): The frequency dividing circuit according to claim 24, wherein the dummy circuit is the same amplifier as an input amplifier of the second frequency divider.

Claim 27 (new): The frequency dividing circuit according to claim 24, wherein the dummy circuit is the same circuit as a part of an input amplifier of the second frequency divider.

Claim 28 (new): The frequency dividing circuit according to claim 26, further comprising a control section for controlling the current of the input amplifier and the dummy circuit.

Claim 29 (new): The frequency dividing circuit according to claim 23, wherein the phase correction unit includes a control section for controlling the current of an in-phase output amplifier of the first frequency divider

and a quadrature output amplifier of the first frequency divider.

Claim 30 (new): The frequency dividing circuit according to claim 23, wherein the phase correction unit includes a control section for controlling the current of a dummy circuit connected to the first in-phase local oscillation signal output, an in-phase output amplifier of the first frequency divider, and a quadrature output amplifier of the first frequency divider.

Claim 31 (new): The frequency dividing circuit according to claim 30, wherein the dummy circuit is a circuit including a resistor and a capacitor.

Claim 32 (new): The frequency dividing circuit according to claim 30, wherein the dummy circuit has the same circuit configuration as an input amplifier of the second frequency divider.

Claim 33 (new): The frequency dividing circuit according to claim 30, wherein the dummy circuit has the same circuit configuration as a part of an input amplifier of the second frequency divider.

Claim 34 (new): The frequency dividing circuit according to claim 32, further comprising a control section for controlling the current of the input amplifier and the dummy circuit.

Claim 35 (new): A multimode radio comprising a frequency dividing circuit according to claim 23.

Claim 36 (new): The multimode radio according to claim 35, further comprising:

a local oscillator for outputting a local oscillation signal to the first frequency divider;

a first quadrature modulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature modulator for performing quadrature modulation of an in-phase baseband transmission signal and a quadrature baseband transmission signal and outputting a first transmission signal having a first frequency; and

a second quadrature modulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature modulator for performing quadrature modulation of the in-phase baseband transmission signal and the quadrature baseband transmission signal and outputting a second transmission signal having a second frequency.

Claim 37 (new): The multimode radio according to claim 36, further comprising a control section being connected to the second frequency divider, the first quadrature modulator, and the second quadrature modulator for switching a mode between a mode of transmitting the first transmission signal and a mode of transmitting the second transmission signal.

Claim 38 (new): The multimode radio according to claim 35, further comprising:

a local oscillator for outputting a local oscillation signal to the first frequency divider;

a first quadrature demodulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature demodulator for performing quadrature demodulation of a first reception signal having a first frequency and outputting an in-phase baseband reception signal and a quadrature baseband reception signal; and

a second quadrature demodulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature demodulator for performing quadrature demodulation of a second reception signal having a second frequency and outputting the in-phase baseband reception signal and the quadrature baseband reception signal.

Claim 39 (new): The multimode radio according to claim 38, further comprising a control section being connected to the second frequency divider, the first quadrature demodulator, and the second quadrature demodulator for switching a mode between a mode of receiving the first reception signal and a mode of receiving the second reception signal.

Claim 40 (new): The multimode radio according to claim 35, further comprising:

a local oscillator for outputting a local oscillation signal to the first frequency divider;

a first quadrature modulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature modulator for performing quadrature modulation of an in-phase baseband transmission signal and a quadrature baseband transmission signal and outputting a first transmission signal having a first frequency;

a second quadrature modulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature modulator for performing quadrature modulation of the in-phase baseband transmission signal and the quadrature baseband transmission signal and outputting a second transmission signal having a second frequency;

a first quadrature demodulator to which the first in-phase local oscillation signal and the first quadrature local oscillation signal are input, the first quadrature demodulator for performing quadrature demodulation of a first reception signal having the first frequency and outputting an in-phase baseband reception signal and a quadrature baseband reception signal; and

a second quadrature demodulator to which the second in-phase local oscillation signal and the second quadrature local oscillation signal are input, the second quadrature demodulator for performing quadrature demodulation of a second reception signal having the second frequency and outputting the in-phase baseband reception signal and the quadrature baseband reception signal.

Claim 41 (new): The multimode radio according to claim 40, further comprising a control section being connected to the second frequency divider, the first quadrature modulator, the second quadrature modulator, the first quadrature demodulator, and the second quadrature demodulator for switching a mode between a mode of transmitting the first transmission signal and receiving the first reception signal and a mode of transmitting the second transmission signal and receiving the second reception signal.